

# CSCI-1411 FUNDAMENTALS OF COMPUTING LAB

# Lab 5: Loops and Files

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## □ Overview:

### ▣ Loops

- while ← pre-test or top test loop
- do-while ← post-test or bottom test loop
- for

### ▣ Nested loops

### ▣ Files

- `#include <fstream>`
- Input can come from files (`ifstream` data type)
- Output can go to files (`ofstream` data type)
- `file_variable.open(file_name)`
- `file_variable.close()`

# Lab 5: Loops and Files

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## □ Overview:

### ▣ Lab 5 Components

- Lab Sections (5.1, 5.2, 5.3, 5.4, 5.5, 5.6)
- No design document for 5.6

# Lab 5: Loops and Files

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- 5.1 Working with the `while` Loop
  - (`while.cpp`)
  - Answer questions asked in [exercise 1, 3, 5, 6](#)
- 5.2 Working with the `do-while` Loop
  - (`dowhile.cpp`)
  - Answer questions asked in [exercise 2 & 3](#)
- 5.3 Working with the `for` Loop
  - (`for.cpp`)
  - Answer questions asked in [exercise 1 & 2](#)
- 5.4 Nested Loops
  - Don't match the sample output – **Implement Exercise 2.**
  - (`nested.cpp`)

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## □ 5.5 Reading and Writing to a File

- How to create `transaction.dat` from UNIX terminal?

- Copy the file to the same directory as your `billfile.cpp`

  - Ex:

    - `/myhome/csci1411/lab5/billfile.cpp`

    - `/myhome/csci1411/lab5/a.out`

    - `/myhome/csci1411/lab5/transaction.dat` (must be same directory as `a.out`)

- Match the output displayed in Exercise 2 (read the values from the file).

- (`billfile.cpp`)

## □ 5.6 Programming Assignment

- Choose 1 of the 3 options

- Name the source file: `main.cpp`

- No Design Document

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- ❑ Submission File Checklist
  - ❑ Submit all files on Canvas (in a single zip file). Be sure to include all source files and documents.
  
  - ❑ 5.1 while.cpp
  - ❑ 5.2 dowhile.cpp
  - ❑ 5.3 for.cpp
  - ❑ 5.4 nested.cpp
  - ❑ 5.5 billfile.cpp
  - ❑ 5.6 main.cpp (For any option you choose)